A Hospital Epidemiologist’s Guide to the Galaxy

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“You never let a serious crisis go to waste. And what I mean by that it’s an opportunity to do things you think you could not do before.”
— Rahm Emanuel
My First Foray Into Emergency Preparedness...

**Laboratory Accident**

<table>
<thead>
<tr>
<th>August 8</th>
<th>16</th>
<th>18</th>
<th>19</th>
<th>20</th>
<th>21</th>
</tr>
</thead>
<tbody>
<tr>
<td>Centrifuge accident</td>
<td>First symptoms</td>
<td>Seeks treatment</td>
<td>Hospitalized</td>
<td>HE notified; CDC arrives 11 PM</td>
<td>First press conference</td>
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- Researcher travels to Boston
- 142 potential case contacts; 62 hospital laboratory staff members exposed
Management of a Sabin Virus-Infected Patient in a US Hospital

Managing a Sabin virus infection in a hospital setting involves several key steps:

1. Management of case patient
2. Management of laboratory specimens
3. Management of case contacts
4. Contingency plan for secondary cases

Example of “Reverse Publicity”

Yale Scientist Calls Reaction to Accident Overblown

August 23, 1994 | By LAURIE GARRETT and ROBERT COOKE, Newsday

A Yale University researcher infected by an extremely rare and dangerous virus in what he called a “banal accident” in his lab said Monday he is recovering despite the exotic virus’s deadly potential.

Reached by phone in his Yale-New Haven Hospital room, Dr. [name redacted] said he was “feeling fine” but complained that “people are making too much of the incident.” He said he broke his dangerous 103-degree fever in 24 hours of experimental treatment with the drug ribavirin.
Anthrax 2001: Reality Check

- Bioterrorism becomes real, not just a theoretical threat
- HICS: what it is, healthcare epidemiologist's role
- Smallpox preparedness
  - Mass vaccination planning
  - Surge capacity; “infectious diseases hospital(s),” mortuary services
- Quarantine
- Coordinate and work with local and state public health departments

SARS 2003
“We Have No Idea What Preparedness Looks Like”

Facility access

Screening

IDSA

SARS Lessons Learned for the USA from IDSA Physicians Who Worked in Toronto.

Objectives and Methods: The response of several United States hospitals to early cases of SARS in 2003 allowed for effective control of the disease or to limit the transmission of SARS. The lessons learned of these hospitals in Toronto, Ontario, Canada, enabled the design of an initial plan to control the spread of SARS to North American hospitals. The planning and implementation of a multihospital response to SARS were facilitated by the development of a national SARS care plan. The plan was designed to provide guidance to hospitals and other health care facilities in order to facilitate the care of SARS patients and other cases with respiratory symptoms who require hospitalization. The plan also provided guidance to hospitals and other health care facilities in order to facilitate the care of SARS patients and other cases with respiratory symptoms who require hospitalization. The plan also provided guidance to hospitals and other health care facilities in order to facilitate the care of SARS patients and other cases with respiratory symptoms who require hospitalization.

Facility access

Screening
- Patient care
- Precautions
  - SARS units
  - AIIR
  - Cleaning

- PPE
- Patient transport
- Ancillary services
- Procedures/surgery

SARS Assessment Clinics
- Patient follow-up
- Assessment clinics
Takeaways

- The basics count
- Prepare a PPE stockpile
- Plan for an “infectious diseases” unit/ward
- Plan for AIIR surge capacity
- Plan for securing entry points, screening
- Plan for just-in-time training
- Address laboratory safety
- Implement respiratory hygiene/cough etiquette
- Communicate: many ways, many times, many venues, and many audiences
- Plan and prepare—don’t wait!
WIN

- **Watch**: Ask the appropriate epidemiologic questions
- **Isolate** immediately
- **Notify**: Communicate immediately as required

- Use HICS
- Access PPE stockpile, replenish immediately
- Partner with occupational health specialists
- Evaluate laboratory capacity
- Evaluate antiviral medication supply
- Communicate with staff, patients, and the community constantly
  - Discuss facility access
  - Address pediatrics, OB issues, and ambulatory/outpatient areas
  - Consider visitor restrictions
August-September 2014

- Prepare to detect
- Prepare to protect
- Prepare to respond

- Use HICS!
- Assess current policy/protocols; update and supplement as needed
- Practice and “walk” the plan
10-15-14/7:30 PM

- Notified at 7:30 PM on 10/15/14 of returned traveler from Liberia with fever, diarrhea

10-16-14/2:00-5:00 AM
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— Rahm Emanuel
Additional Resources

  CDC. emergency.cdc.gov/planning/
ABBREVIATIONS/ACRONYMS
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AIIR = airborne infection isolation room
CDC = Centers for Disease Control and Prevention
CoV = coronavirus
HICS = Hospital Incident Command System
MERS = Middle East respiratory syndrome
OB = obstetrics
PPE = personal protective equipment
SARS = severe acute respiratory syndrome